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By email to NetworkAccessReform@Ofgem.gov.uk

Dear John

Network Access Reform

As an independent consultant with over 20 years' experience in the regulation and management of distribution networks I would like to thank Ofgem for this opportunity to contribute to an important matter issue, defining the products networks charge for. My experience within the industry and that gained engaging and working with innovators in the sector over the past year has shaped my conviction of the need for change. Ofgem's consultation and proposed code review are an important opportunity to hear the needs of new service providers and shape better approaches that allow those who provide services across the networks to buy what they need from networks.

Energy looks increasingly likely to be used by customers as part of a service and as such the industry needs to look to these new intermediaries to help shape products that allow a flexible system to emerge but without undue complexity.

Most customer services consume energy; cooking, washing lighting, heating and transport all need an amount of energy to be delivered. Today the network and generation capacity needed to deliver the energy has to be provided on demand. As the ability to control energy flows increases smart service providers will have different ways of meeting customers energy needs, best utilising the energy resources and network capacity. Explicitly charging for the capacity customers want available therefore makes more sense than charging a less explicit measure (kWh over a half hour is a measure of capacity).

Networks will still need to deliver capacity, but there may be more 'flavours' reflecting different customer choices and needs. Ideally the customers (or their representatives) should be able to choose ahead of need should reflect what networks deliver. The reform

of network products/service is also an opportunity to improve the information available to network operators that drives optimal future investment.

As network operators start to pay for additional demand side services, there is a risk of the complex interactions making the fair allocation of costs more difficult. All tariffs are a compromise of allocating largely fixed costs derived from price controlled allowed revenues, of which true avoidable forward costs represent only a small proportion (c6% of today's DSO expenditure). Future network charges need to work in harmony with emerging flexibility products, avoiding any potential doubling counting.

Ofgem are right to identify that to allocate fixed and sunk costs fairly, there needs to be an agreement about what guaranteed capacity small customers should have access to as a basic service. Ofgem should lead this key policy debate so that customers' needs are the primary driver.

Ofgem also need to lead on policy concerning access rights at the point of connection and their ongoing allocation. Shallow connection costs and the ability to buy network access ahead of need (rather than paying for what has been used) may allow improved ongoing allocation of capacity and provide economic signals to align demand and production with less need for system operators to run real time markets to manage capacity. I would agree that access rights prices should be administered in the first instance rather than being subject to any auction regime.

Responses to Ofgem's specific questions are included in the attached appendix.

Please do not hesitate to contact me should you want further clarification on any of my responses.

Regards



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Appendix – Response to Ofgem’s Questions

Question 1

There is a compelling need to define access rights products for distribution networks.

For distribution generation customers a move towards the connect and manage approach with a form of tradeable right would be sensible, instead of the current first come first served access arrangements.

This is also the case for domestic customers where the need to fairly share costs where early adopters of new technologies create new costs for the services they require.

Question 2

The current ongoing energy system charges customers for what you have used, rather than charging you for providing the capability to do what you need to do. Yet the latter is what customers need and what the system should be designed to deliver.

Distribution charges models are a means of allocating largely fixed costs to users, whilst maintaining incentives to use the system efficiently through peak charges. The only element of distribution charges billed through DUoS that are avoidable are the reinforcement costs, which today only represent about 6% of the companies’ expenditure (Ofgem 2016/17 annual report data).

Managing or avoiding congestion requires both signals to consumers about the costs and also for customers to have a means for signalling their needs.

Current trends are for consumers to increasingly buy energy as part of a service, be that the energy to heat, or travel a certain distance. That energy can be delivered quickly or slowly depending on the capacity available. Electrical energy has, until now, had to be delivered when it was needed, but affordable storage is changing that relationship. To deliver their service network operators need to know how much capacity customers will want, when and for how long.

The other element of the service customers get as part of the network service is resilience. Definition of different types of capacity rights, firm and non-firm, would help the development of future security of supply standards.

Defining the product demand services buy from networks as an amount of firm capacity at given times, with additional capacity beyond that, purchased ahead of need would more closely match the needs of future energy services.

Question 3

If capacity rights are to be defined then both firm and non-firm rights need to be available. For individual small users rights may only need to be local, but their service providers may need to have deeper products, giving a choice between local production and storage and network services. The depth of access rights clearly needs to be defined and in doing so identify which parties are buying rights to which parts of the system. Creating a more coherent approach between transmission and distribution is clearly desirable.

- a) Setting a core threshold needs consideration of two issues – peak usage and average usage over a period (eg half an hour). Metered peak usage is problematic in that it can represent an instantaneous value that has no material impact on the system or other users if it is a one off or infrequent event, whereas it can be significant for particular users (eg welding) if it repeats frequently. Further work to define different customer / user profiles is needed as this may lead to specific capacity products – this should use available smart meter data held by suppliers or held on smart meters.

Core demand should reflect today's system or those costs chosen to be socialised as part of any wider policy decisions taken in reviewing the choice made at RIIO-ED1 to socialise LCT reinforcement costs for small customers.

The matter of whether access rights should be short or long term raises a number of questions. Once the capacity is available, then the cost of a unit of capacity is inherently 'fixed' and has to be funded. Long term rights with an obligation to fund them may suit such an arrangement better than short term rights, where there would remain a question of future funding risk for long term assets.

Tradeable access rights may provide a solution that could support both stable long term funding and allow shorter term access products. Tradeable rights may also be enable forward buying of capacity, eg for EV charging products, reducing the need for reactive management of demand.

- b) Clear firm and non-firm rights will be essential for operating flexibility markets and for developing future security of supply frameworks to support firm demand.

The rights for embedded generation to access higher voltage systems and non-local markets might help with allocation of costs for higher voltage networks can crate improved economic signals for storage and local demand to improve resource usage and transmission operation.

- c) Access rights must be designed to reflect seasonal factors where the system capabilities are a function of demand and generation balance. This is probably most important for generation users, but seasonal requirements may be the limiting factor in costs for demand customers with the electrification of heat, cooling and transport.

Question 4

Table 1 identifies the key issues but Ofgem should also consider how defining rights could inform improved products for network access, including the forward purchase of access rather than relying on ex-post charging alone (there may still be a need for some form of settlement).

Question 5

Ofgem are probably right to put aside access capacity auctions. It would be possible for DSOs to publish existing and additional capacity costs as administered prices.

Connect and manage approaches using administered prices may form a better approach to managing connections queue, with capacity rights being purchased as connections are energised, rather than having costs and access being dependent on your position in a queue.

A system of tradeable rights would support the more flexible use of the system by users without relying on DSOs to administer all flexibility, but in a way that allows both approaches to operate coherently.

Question 6

A review DUoS charges is needed. 'Forward looking' DUoS charges are a construct for allocating largely fixed price controlled revenues to customers and must be reviewed to meet the needs of any revised access arrangements

The review should start with the nature of the charges, and structure of possible capacity reflective charges could be used and how these could better support the new demands of networks and help drive investment into the right areas, whilst maintaining fair charges.

The review should also consider the options for introducing greater granularity in charges, whilst maintaining fair costs.

The outcome of this work should then inform the necessary changes or replacements for CDCM and EDCM, potentially harmonising them if possible.

Question 7

The nature of the connection boundary and network charging approaches are inextricably linked and so must be reviewed to ensure that appropriate signals remain to ensure economic development of the energy system as a whole and fair allocation of costs. A lower overall system cost is essential to minimising customers long term charges.

Question 8

A consistent philosophy is needed for the allocation of network costs between demand and generation. Distribution costs were allocated to demand as this is what largely drove their development and where the final costs fell, with some credit being given for generation that could offset network investment. Generation, either through connection or use of system charges should have clear signals as to where it is increasing system costs above those needed for demand in order to ensure the economic development of whole system.

Questions 9 and 10

No further points

Question 11

In order to have a customer focused review it would be preferable if either Ofgem lead the SCR, particularly in the areas of:

- Nature of charging approaches such as charging for capacity to ensure these support the development of new energy products and the correct allocation of costs
- The issues associated with more granular charging at distribution

It is important that alternative views are revealed through this process and that new energy companies and those for whom energy is part of a service offering have a say in shaping the future services that the networks charge for.

The review should be comprehensive to ensure that a coherent and easily understood regime of charges is developed.

The industry expertise will be essential and will be needed for the development of revised charging methodologies based on the principles are established.